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Reply to Office action of January 25, 2005
Attorney Docket No. P12683/27943-00397USP1
EUS/JP/05-6045

REMARKS/ARGUMENTS

1.) Claim Amendments

The Applicants have amended Claims 1-5, 7-8, 11, 13-14, 16, 18-21, 26-28; Claims 9, 10, 15 and 22-25 have been cancelled. Applicants respectfully submit no new matter has been added. Accordingly, Claims 1-8, 11-14, 16-21 and 26-28 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

2.) Examiner Objections – Specification

The Examiner objected to the specification because of certain informalities. The Applicants thank the Examiner for his careful review of the specification. In response, the Applicants have modified the specification as suggested by the Examiner. The Examiner's consideration of the amendments to the Specification is respectfully requested.

3.) Examiner Objections - Claims

The Examiner objected to Claim 1 because of certain informalities. Again, the Applicants appreciate the Examiner's thorough review of the claims. The Applicants have amended Claim 1 as suggested by the Examiner in order to correct the informalities. The Examiner's consideration of the amended claims is respectfully requested.

4.) Claim Rejections – 35 U.S.C. § 103 (a)

The Examiner rejected claims 1-3, 5 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Christie et al (US 6,535,483) in view of Brueckheimer et al. (US 6,023,465). Applicants respectfully traverse the Examiner's rejections and have further amended the pending claims to more clearly and distinctly claim the subject matter which Applicants consider as their invention and further submit that the present invention, as recited by the amended claims, is not anticipated or rendered obvious by the cited references.

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As fully disclosed in the present application and further provided in the response to the previous office action, as broadband switches (such as ATM switches) are newly introduced into an existing telecommunication network, rather than completely switching over from using existing narrowband switches (such as STM switches) to the newly developed ATM switches, there is a need for gradually introducing such ATM switches into an already existing telecommunications network. In for a switch to function properly, it requires both call connection functionalities as well as call control functionalities. In accordance with the teachings of the present invention, in order to maximize the existence of call control functionalities being provide by switching intelligence or call control applications within an existing narrowband switch and to avoid requiring a newly introduced broadband switch to include both call connection functionalities as well as call control functionalities, the switching intelligence or call control applications within the narrowband switch are used to control and to provide call control functionalities to the broadband (i.e., ATM) switch. As an illustration, an existing legacy switch (such as Ericsson's AXE switch) already fully equipped with all of the necessary call control functions (such as call setup, call waiting, three-way calling, call transfer, etc) are used to control and to provide call control functionalities over the newly introduced broadband switch as well. By allowing the existing narrowband switch to control the newly introduced broadband switch and to provide the necessary call control functionalities, rather than redesigning and introducing brand new call control functionalities for the newly introduced switch, existing functionalities with the existing narrowband switch can instead be economically and conveniently reused.

Accordingly, Applicants have further amended the pending independent Claims to more clearly and distinctly claim the subject matter of the present invention. A cleaned version of now pending Claim 1 is recited below for the Examiner's review:

1. (Currently Amended) An arrangement for combining narrowband and broadband transport mechanisms in a communications network, comprising:

a first network switch, said first network switch configured to provide call control functions and connection control functions wherein said connection

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control functions are provided using a narrowband switch fabric and wherein said call control functions are provided using call control applications; and

a second network switch, said second network switch connected to said first network switch by at least one link, said second network switch configured to provide connection control functions wherein said connection control functions are provided using a broadband switch fabric, and

wherein said call control applications within said first network switch further provides call control functions for said second network switch by providing instructions to said broadband switch fabric over said one link.

Applicants respectfully submit that the arrangement of the first network switch connected to the second network switch wherein the call control applications within the first network switch providing call control functionalities to the second network switch as disclosed and claimed by the present application is not anticipated or rendered obvious by the cited references.

More specifically, Christie merely discloses an interworking unit for receiving signals from a user communication device and processing the call signaling to select a particular one of a plurality of connections to a service platform. In that regard, Christie discloses an interworking unit for converting user communications in time division multiple format (TDM format) to asynchronous transfer mode (ATM) formatted cells that identify the selected connection to the service platform. In that regard, the node (110) and the node (114) in Fig. 2 of Christie are a signaling processor and an interworking unit for receiving TDM format signaling from the communication device (106) and for converting such data into ATM formatted cells to be transported over the ATM cross connect (236).

Accordingly, since Christie deals with and discloses an interworking unit for interfacing and converting signaling data generated from the communication device (206) and for making such data compatible to be transported over the ATM cross connect (230), Applicants therefore submit that Christie has nothing do with the telecommunication arrangement for combining narrowband and broadband transport mechanism as currently claimed.

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For example, nothing in Christie discloses a first network switch configured to provide call control functions as well as connection control functions wherein the call connection functions are provided using a narrowband switch fabric and the call control functions are provided using call control applications. Furthermore, nothing in Christie discloses a second network switch connected to the first network switch and configured to provide connection control functions using a broadband switch fabric. Further in accordance with the teachings of the present invention, the call control applications within the first network switch is then used for providing call control functionalities within the second network switch by the first network switch providing instructions to said broadband switch fabric.

In summary, the signaling processor (110) within Christie is not a first network switch containing both call control applications as well as narrowband switch fabric. Furthermore, the interworking unit (114) in Christie is not a second network switch containing broadband switch fabric and relying on the call control applications of the first network switch to provide call control functionalities therein. The Examiner again maintained the same rejection from the previous office action that the certain portion of Christie allegedly discloses the second network switch being controlled by the first network switch (Christie, Col. 8, lines 17-22). However, Applicant respectfully submit that the cited portion of Christie merely states that the interworking unit (114) receives control message to identify the required interworking assignments so that the user communications are converted between the formats that are compatible with different devices and platform. However, it has nothing to do with a broadband switch (second network switch) receiving instructions from a narrowband switch for providing call control functionalities as currently claimed.

The Examiner further incorrectly stated that "Brueckheimer explicitly disclose such using a narrow switch fabric and a broadband switch fabric." Applicants agree with the Examiner that Brueckheimer indeed discloses an ATM switch (12) connected to a narrowband network (11, Fig. 1 of Brueckheimer). However, there is nothing in Brueckheimer that discloses call control applications in the first network switch (narrowband switch) controlling and providing call control functionalities to the second

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network switch (broadband-ATM switch). Since Christie as well as Brueckheimer, independently or in combination, fail to disclose or teach such a novel element, Applicants respectfully submit that Claim 1 as amended is patentable over the cited references. Applicants further submit claims 2-9 are dependent on now allowable independent Claim 1 and are also in condition for allowance.

5.) Claim Rejections – 35 U.S.C. § 103 (a)

The Examiner also rejected claims 11-13 and 15-17 under 35 U.S.C. § 103(a) as being unpatentable over Christie et al (US 6,002,689) in view of Brueckheimer et al. (US 6,023,465).

Applicants respectfully submit that Christie 689 also fails to anticipate or render obvious the present pending claims. In that regard, Christie 689 discloses an interworking unit (Fig. 3, 204) for allowing different communication devices to be connected (302) to an ATM cross connection (316). Such different communication devices include GR-303 link (304), ISDN link (344), SONET OC-3 link (350), and DS3 link (348). The Examiner incorrectly identified the ISDN IW Unit (334) as the first network switch and the interworking unit (240) as the second network switch as currently claimed in the present invention. However, there is nothing in the ISDN IW Unit of Christie 689 that discloses switching intelligence for providing call control functions and narrowband switching fabric for providing call connection functions. Applicants respectfully submit that ISDN IW Unit in Christie 689 is for connecting an ISDN line to the general interworking unit and is not a network switch capable of providing call control and call connection functionalities as currently claimed. Also, the interworking unit (204) of Christie 689 is not a second network switch containing broadband switching fabric for providing call connection functions and for receiving control signaling information from the switching intelligence within the first network switch for providing call control functions therein.

Also, as further provided above, other than disclosing a narrowband network interfacing with a broadband network using an interworking unit, Brueckheimer also fails

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to anticipate or render obvious the present invention wherein the broadband switching fabric within the second network switch is controlled by the switching intelligence associated with the narrowband switch fabric within the first network switch.

For at least the following reasons, Applicants earnestly believe independent Claim 11 and its dependent claims are now in condition for allowance.

6) Claim Rejections – 35 U.S.C. § 103 (a)

The Examiner also rejected claims 18-21 under 35 U.S.C. § 103(a) as being unpatentable over Christie et al (US 6,002,689) in view of Brueckheimer et al. (US 6,023,465). For at least the reasons as provided above, Applicants submit that amended independent Claim 18 and its dependent claims are also in condition for allowance. A favorable reconsideration by the Examiner is respectfully requested.

7) Claim Rejections – 35 U.S.C. § 103 (a)

The Examiner also rejected claims 22-28 under 35 U.S.C. § 103(a) as being unpatentable over Christie et al (US 6,002,689) in view of Brueckheimer et al. (US 6,023,465). Applicants have cancelled Claims 22-25 without prejudice to reduce the total number of claims.

Regarding independent Claim 26, Applicants again submit that nothing in Christie 689 discloses a first network switch including a call control logic for performing call control functionality, a synchronous transfer mode (STM) switch, and a first connection control logic for performing connection control functionality over that STM switch. The ISDN IW Unit (334) identified by the Examiner as allegedly disclosing the first network switch is a mere interworking unit and fails to disclose or teach a STM switch included therein.

Also, the main interworking unit (204) does not include an ATM switch as currently claimed within the second network switch. It merely includes an ATM interface for connecting to an ATM cross connect (318) which in turn connects to the ATM

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network (320). In that regard, even though call instructions could pass from the communication devices (302) to the ISDN IW Unit (334) to the Interworking Unit (204) as stated by the Examiner, there is nothing in Christie 689 wherein the first connection logic for performing call connection control within the first network switch is used for providing control signaling information for controlling the ATM switch within the second network switch as currently claimed.

Accordingly, Applicants submit that now amended independent Claim 26 and its dependent claims are now also in condition for allowance.

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CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,


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